THE EFFECT OF BOARD OF DIRECTORS' CHARACTERISTICS ON THE LIKELIHOOD OF GHANAIAN LISTED BANKS' EXPERIENCING FINANCIAL DISTRESS

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THE EFFECT OF BOARD OF DIRECTORS’ CHARACTERISTICS ON THE LIKELIHOOD OF GHANAIAN LISTED BANKS’ EXPERIENCING FINANCIAL DISTRESS

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Abstract: The study sought to examine the effect of the board of directors’ characteristics on financial distress among Ghanaian listed banks. It seeks to address the conflicting findings in board characteristics and financial distress from the Ghanaian perspective. A generalized linear model (Probit regression analysis) was used to establish the effect due to the binary nature of the dependent variable. Thus, “1” depicting financial distress and “0” depicting non-financial distress. The explanatory research design was employed in explaining such an effect. Secondary data were used and were obtained from the annual reports. Data gathered for this study covers a period of 8 years (2010 – 2017). The sampled size of 11 listed banks was used. The finding portrays that, among the board characteristics, only female board size has a significant negative effect on listed banks' financial distress. In contrast, the board size, executive board, and non-executive board have no significant effect on banks’ financial distress. Likewise, none of the control variables (bank age, bank leverage, and net profit margin) significantly affect banks’ financial distress. Therefore, the study concludes that female inclusion on corporate boards could significantly minimize the possibility of listed banks experiencing financial distress. Hence, it is highly recommended that listed banks increase their female gender quota on their board to achieve greater performance levels.

Keywords: Board of directors’ characteristics, financial distress, generalized linear model (Probit regression analysis), listed banks, and bank age.

I. INTRODUCTION

Lately, criticisms have been geared toward corporate governance practices, leading to reforms in corporate governance codes, especially the composition of corporate boards. There is a continuous debate that the corporate board of directors has failed in the discharge of their duties in ensuring the fiduciary relationship between them and shareholders (Abdullah, 2006). Many developed economies in the aftermath of the financial scandals and crises have tightened their corporate governance regulations and disclosures (Ho and Shun, 2001). Financial crises that seriously impacted the global economy contributed to reviewing corporate governance mechanisms and practices among firms. Policy makers raised red flags about managerial entrenchment and corporate board of directors’ failure to ensure strict supervision on executive managements contributed to serious risk exposures and financial instability (Anginer, Demirguc-Kunt, Huizinga & Ma, 2018). As it stands now, in theory, there is no clear indication about the right mix of the board of directors’ characteristics which results in less risk to financial instability through their prudent decisions.

There is a bone of contention in relation to the specific board characteristics that lead to the prevention of financial distress among businesses. Some studies are of the view that executive directors (Rohani, Kamarun, Rohaida and Zarina, 2013; Ntim, Opong, and Danbolt, 2012), non-executive directors (Obokoh, 2018), board size (Anning, Clara, Doris and...
Elvis, 2021, Manduku, Mulwa, Omolo, & Lari, 2020; Rahmasari, 2018; Xavier, 2014) and female board size (Farida, Sri, and Hudam, 2015) impacts meaningfully on firms performance. These characteristics per these authors can serve as a valuable tool for avoiding financial distress. On the contrary, other studies argue that the mere presence of executive board, non-executive board, the female board size, and large or small board size in itself, thus not lead to the avoidance of financial distress or enhanced performance. For example, Anning et al. (2021) assert that the mere inclusion of females on listed banks’ boards does not automatically result in performance enhancement unless they are adequate to influence decision making. Also, Adams and Mehran (2011) identify no significant relationship between non-executive directors and financial distress. Similarly, Lakshana and Wijekoon (2012) observed no significant relationship between board size and financial distress.

Given the studies as mentioned earlier conflicting findings, it is prudent to examine which board characteristics impact meaningfully financial distress within listed banks in the Ghanaian setting. In addition, the continuous closure of banks and recent consolidation of banks is a clear picture of banks’ board failure. Most of these closures and consolidation were purely due to financial distress conditions (Anning and Adusei, 2020). In view of this, establishing board characteristics that lead or curtail financial distress will contribute meaningfully to resolving this recurring problem.

This study is of great tremendous benefit to the banking industry and literature. First, it contributes to the extant literature on the concept of a board of directors and financial distress by providing evidence on the extent to which financial distress is associated with the board of directors’ characteristics. Second, it finds the most effective and efficient board of directors’ composition that promises financial sustainability and liquidity. To conclude, to provide guidelines that can contribute to enhancing this study. This study also aims to provide guidelines that can enhance corporate governance regulation by government and regulators, specifically the Bank of Ghana.

II. MATERIALS AND METHODS

Research Design

The study is strictly explanatory quantitative research design, which employs unbalanced panel data. It is quantitative because the emphasis is placed on only financial data. All the variables (board characteristics, financial distress, and control variables) adopted are quantitative. Hence, the choice for quantitative research designs. Since specific financial data for some of the banks considered for the study were not available, unbalanced panel data were used. The study sort to pool available data on cross-sectional units covering eight (8) years. Generalized linear model (Probit regression analysis) was employed to establish the board characteristics effect on financial distress due to the binary nature of the dependent variable (thus, “1” to represent financial distress and “0” for non-financial distress. Pearson correlation matrix was used to check for multicollinearity.

Study Population and Sampling

The study is cantered explicitly on banks in Ghana. The study choice for the banking sector is regarded as the most highly regulated sector within their Ghanaian economy due to the spill-over effect of its operational activities on other sectors of the economy. The study population covers all the entire banks that existed prior to the recapitalization and takeover by the bank of Ghana. The study adopted the purposive sampling technique in its determination of the sample size. Banks to be included in the study were strictly limited to listed banks. The decision to restrict the study sample size to only listed banks was the availability of readily and reliable data. Since additional regulatory requirements are required for listed banks by the security and exchange commission apart from the regulations from the Bank of Ghana, it is presumed that their financial statement is, to some extent, reliable. Also, their financial data are readily available on the Ghana stock exchange website apart from what they have on their official website. Hence, the study’s sample size was limited to 11 listed banks: Access Bank, Agricultural development bank, Cal bank, Ecobank, GCB bank, HFC bank (Republic bank), SG SSB bank, Standard charted bank, Trust bank, and UT bank.
Data Collection Instrument

Data collected for the study was Secondary data. These data were extracted from the annual reports of the banks using Microsoft Excel. These annual reports were retrieved from the Ghana stock exchange website, Africanfinancials.com, and the respective bank’s website.

Variables

The variables considered for this study is categorized into a dependent variable, independent variables, and control variables. The dependent variable is financial distress which the Altman’s revised z-score model measures. This variable is further grouped into two, namely financial distress indicated by 1 and non-financial distress also indicated by 0. The independent variable is board characteristics. The variables used to measure board characteristics are board size, the executive board of directors, non-executive board of directors, and female board size.

In essential order not to exclude important variables that can also impede the study findings and ensure uniformity, three control variables were included in the study model specification. They are bank age, bank leverage, and net profit margin. The table outlined below provides a detailed description of all the variables and how they are defined as per the study.

<table>
<thead>
<tr>
<th>Table 1: Dependent, Independent, and Control Variables Defined</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
</tr>
<tr>
<td>Financial Distress: Altman z-score</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
</tr>
<tr>
<td>1. Board Characteristics:</td>
</tr>
<tr>
<td>Board Size</td>
</tr>
<tr>
<td>Executive Board</td>
</tr>
<tr>
<td>Non-executive Board</td>
</tr>
<tr>
<td>Female board size</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
</tr>
<tr>
<td>Bank Leverage</td>
</tr>
<tr>
<td>Net profit margin</td>
</tr>
</tbody>
</table>
Model Specification

The Generalized linear model (Probit regression analysis) design for the study is outlined below:

\[ FD = \beta_0 + \beta_1 BODSIZ + \beta_2 EXCBOD + \beta_3 NONEXCBOD + \beta_4 FBODSIZ + \beta_5 BANKAGE + \beta_6 BANKLEVG + \beta_7 NPMARGIN + E. \]

Where:

FD = Financial distress

BODSIZ = Board Size

EX-BOD = Executive Board of Directors

NON-EX-BOD = Non-Executive Board of Directors

FBODSIZ = Female Board Size

BANKAGE = Bank Age

BANKLEVG = Bank Leverage

NPM = Net Profit Margin

E = Error term

III. RESULTS

Table 2: Descriptive Statistics of Independent Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BODSIZ</td>
<td>84</td>
<td>6</td>
<td>12</td>
<td>9</td>
<td>1.6</td>
</tr>
<tr>
<td>EX-BOD</td>
<td>84</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>NON-EX-BOD</td>
<td>84</td>
<td>3</td>
<td>9</td>
<td>7</td>
<td>1.6</td>
</tr>
<tr>
<td>FBODSIZ</td>
<td>84</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>BANKAGE</td>
<td>84</td>
<td>0</td>
<td>121</td>
<td>35</td>
<td>31.5</td>
</tr>
<tr>
<td>BANKLEVG</td>
<td>84</td>
<td>0.6</td>
<td>1.4</td>
<td>0.9</td>
<td>0.1</td>
</tr>
<tr>
<td>NPM</td>
<td>84</td>
<td>-0.3</td>
<td>0.5</td>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>


Table 1 outlines the descriptive statistics of the study’s independent variables. The results postulate that the lowest board size is 6 and the highest is 12. The average board size is 9. Also, the lowest executive board size is 1, and the highest is 6. The average executive board size is 3. Again, the lowest non-executive board size is 3, and the highest is 9. However, on average non-executive board size is 7. This suggests that the majority of the board members on listed banks are non-executive directors. Further, the lowest female board size is 0 compared to the highest of 4. Nevertheless, on average, 2 females are on listed banks’ boards. This is an indication that female representations on listed banks remain woefully inadequate. In addition, the lowest bank age is 0 years compared to the highest of 121 years. Comparatively, on average, the listed banks have an age of 35 years. Again, the lowest bank leverage is 0.6 compared to the higher of 1.4. However, its mean is 0.9. Finally, the lowest net profit margin is -0.3 (-30%), and the highest is 0.5 (50%). However, its average is 0.2 (20%).
Table 3: Pearson Correlation Matrix for the Independent Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>BODSIZ</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EX-BOD</td>
<td>0.298</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NON-EX-BOD</td>
<td>0.743</td>
<td>-0.402</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FBODSIZ</td>
<td>0.121</td>
<td>0.012</td>
<td>0.094</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BANKAGE</td>
<td>-0.117</td>
<td>0.092</td>
<td>-0.189</td>
<td>0.242</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BANKLEVG</td>
<td>-0.212</td>
<td>-0.186</td>
<td>-0.076</td>
<td>0.371</td>
<td>0.098</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>NPM</td>
<td>-0.004</td>
<td>0.368</td>
<td>-0.229</td>
<td>-0.006</td>
<td>0.216</td>
<td>-0.027</td>
<td>1</td>
</tr>
</tbody>
</table>


Table 2 tests for multicollinearity among the independent variables based on the Pearson correlation matrix. The outcome reveals that the independent variables are not highly correlated with each other. The lowest correlation coefficient of -0.004 is reported between net profit margin (NPM) and board size (BODSIZ). Except for the non-executive board and board size, which reported the highest correlation coefficient of 0.743, the remaining variables correlation co-efficient is between -0.004 to -0.402 and 0.371.

Table 4: Generalized Linear Model (Binary Probit Regression Model Results)

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>Std. Error</th>
<th>Lower</th>
<th>Upper</th>
<th>Wald Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>2.309</td>
<td>2.057</td>
<td>-1.723</td>
<td>6.341</td>
<td>1.260</td>
<td>1</td>
<td>0.262</td>
</tr>
<tr>
<td>BODSIZ</td>
<td>0.517</td>
<td>0.691</td>
<td>-0.837</td>
<td>1.871</td>
<td>0.561</td>
<td>1</td>
<td>0.454</td>
</tr>
<tr>
<td>EX-BOD</td>
<td>-0.748</td>
<td>0.721</td>
<td>-2.161</td>
<td>0.665</td>
<td>1.075</td>
<td>1</td>
<td>0.300</td>
</tr>
<tr>
<td>NON-EX-BOD</td>
<td>-0.798</td>
<td>0.696</td>
<td>-2.161</td>
<td>0.565</td>
<td>1.316</td>
<td>1</td>
<td>0.251</td>
</tr>
<tr>
<td>FBODSIZE</td>
<td>-0.534</td>
<td>0.236</td>
<td>-0.996</td>
<td>-0.073</td>
<td>5.145</td>
<td>1</td>
<td>0.023**</td>
</tr>
<tr>
<td>BANKAGE</td>
<td>0.004</td>
<td>0.005</td>
<td>-0.007</td>
<td>0.014</td>
<td>0.468</td>
<td>1</td>
<td>0.494</td>
</tr>
<tr>
<td>BANKLEVG</td>
<td>0.817</td>
<td>1.985</td>
<td>-3.073</td>
<td>4.707</td>
<td>0.169</td>
<td>1</td>
<td>0.681</td>
</tr>
<tr>
<td>NPM</td>
<td>-1.735</td>
<td>1.101</td>
<td>-3.893</td>
<td>0.422</td>
<td>2.486</td>
<td>1</td>
<td>0.115</td>
</tr>
</tbody>
</table>

Omnibus Test
Likelihood Ratio Chi-Square 17.493
Df 7
Sig. 0.014

The significance levels are prescribed as * significant at 10% significance level and ** significant at 5% significance level.

Dependent Variable: Financial Distress
Model: (Intercept), BODSIZ, EXEBOD, NONEXEBOD, FBODSIZE, BANKAGE, BANKLEVG, NPM.


Table 3 above outlines the result of the board of directors' characteristics on financial distress based on a generalized linear model (binary probit regression). Board size (BODSIZ) reported a beta coefficient of 0.517 and sig. Value of 0.454. The executive board (EX-BOD) recorded a beta coefficient of -0.748 and a significance value of 0.300. The non-executive board reported a beta coefficient of -0.798 and a sig—value of 0.25. Female board size recorded a beta coefficient of -0.534 and sig—value of 0.023. Also, three (3) control variables (bank age, bank leverage, and net profit margin) were included in the model. Beta coefficient of 0.004, 0.817and -1.735 was reported for bank age, bank leverage, and net profit margin. Their corresponding sig. values are 0.494, 0.681 and 0.115.
Overall, the significance of the generalized linear model (binary probit regression) is 0.014, and its likelihood ratio Chi-Square is also 17.493. This is an indication that the model has a significant predictive ability to predict financial distress based on the board of directors’ characteristics.

IV. DISCUSSION

The results show that among the board of directors’ characteristics used in predicting the likelihood of listed banks experiencing financial distress, only female board of directors’ size (FBODSIZ) was significant. Thus, female board size has a significant negative effect on the likelihood of listed banks experiencing financial distress. This is because its beta coefficient was negative 0.534 and is sig. value of 0.023 is lesser than 0.05 or 5%. This, in practical terms, means that an increased female board of directors on corporate boards leads to a decrease in banks’ financial distress. In effect, an increase in female board size by 1 will result in a corresponding reduction in the likelihood of listed banks experiencing financial distress by 53.4%. This finding affirms Farida, Sri, and Huda (2015) that gender diversity is negatively connected with the probability of a firm witnessing financial distress. In contrast, the findings established no significant relationship between board size (BODSIZ), Executive board of directors (EX-BOD), Non-executive board of directors (NON-EX-BOD), and banks financial distress. These findings complement Cardoso, Peixoto and Barboza (2019). The argument that non-executive directors’ inclusion on banks’ boards does not guarantee the reduction in the likelihood of experiencing financial distress. However, it contradicts Obokoh (2018), who established a significant relationship between non-executive directors and financial distress. In relation to board size (BODSIZ), the result is line with Lakshana and Wijekoon (2012), who’s finding established no significant relationship between board size and financial distress. However, contradict Manduku, Mulwa, Omolo, & Lari (2020), Rahmasari (2018), and Xavier (2014) argument that board size has a significant negative effect on financial distress. Again, the results on executive directors opposed the findings of Rohani, Kamarun, Rohaida, and Zarina (2013) and Ntim, Opong, and Danbolt (2012) of the view that executive directors’ vast knowledge about the business minimizes the likelihood of financial distress. To end with, all the three control variables (bank age, bank leverage, and net profit margin) were not having a statistically significant effect on financial distress.

V. CONCLUSION

The focal point of this study is centered on establishing the effect of the board of directors’ characteristics on financial distress. This study was based on 11 listed banks and covered 8 years (2010 – 2017). A generalized linear model (Probit regression analysis) was employed due to the dichotomous nature of the dependent variable. The finding postulates that the size of the female board is the sole board characteristic that has a significant negative effect on banks' financial distress. This is an indication that an increase in the size of the female board of directors by 1 minimizes the possibility of the listed banks experiencing financial distress by 53.4%. These results add up to existing literature on board characteristics and financial distress, to the extent that it proposes significant board characteristics that can help minimize the likelihood of listed banks experiencing financial distress. Also, it will serve as a guide for banks in the formulation of their boards. Therefore, the study before the study concludes that female inclusion on corporate boards is pivotal in reducing the likelihood of listed banks experiencing financial distress. The study recommends that, given the crucial role that females play on banking boards in terms of avoiding the possibility of financial distress, listed banks must increase their female quota representation on their boards. Future research could expand the banks to include non-listed banks as well as expanding the proxies for the board of directors’ characteristics.

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REFERENCES


Ellis, K. A. S and Jordi, M (2016). Effect of internal control on credit risk among listed Spanish banks, Intangible Capital, 12(1).


